

What is Claimed Is:

1. A method comprising:
 - detecting network nodes on the network by a network manager;
 - selecting by the network manager a size of address fields to be used for switching data packets traversing the network, based on a number of the detected network nodes;
- 5 configuring by the network manager each network switch of the network to switch each of the data packets based on a corresponding switching tag, added to a start of the corresponding data packet and having the selected size.
2. The method of claim 1, wherein the configuring step includes sending a management datagram to each network switch, the management datagram specifying that switching is to be based on the switching tag, and the selected size of the switching tag.
3. The method of claim 3, wherein detecting step and configuring step each include accessing the network according to InfiniBand™ network protocol.
4. The method of claim 3, further comprising:
 - receiving by a first of the network switches an InfiniBand™ packet having a destination local identifier (DLID) specifying a destination node on the network;
 - adding by the first network switch a new switching tag to the start of the InfiniBand™ packet
 - 5 and having the selected size, and specifying the destination node based on the DLID; and
 - switching the InfiniBand™ packet having the new switching tag to a second of the network switches based on the switching tag.
5. The method of claim 4, further comprising:
 - receiving the InfiniBand™ packet including the new switching tag by the second network switch; and
 - selectively removing, by the second network switch, the new switching tag from the
 - 5 InfiniBand™ packet based on whether the new switching tag specifies a destination node reachable by the second network switch; and
 - selectively outputting the InfiniBand™ packet, following removal of the new switching tag, to the destination node based on the destination node being reachable by the second network switch.

6. The method of claim 5, further comprising selectively outputting, by the second network switch, the InfiniBand™ packet including the new switching tag to a third of the network switches based on a determined unreachability of the destination node by the second network switch.

7. A network manager comprising:

an explorer resource configured for detecting network nodes on the network; and

a controller configured for selecting a size of address fields to be used for switching data packets traversing the network, based on a number of the detected network nodes, the controller configuring each network switch of the network to switch each of the data packets based on a corresponding switching tag, added to a start of the corresponding data packet and having the selected size.

5 8. The network manager of claim 7, wherein the network manager is configured for sending a management datagram to each network switch, the management datagram specifying that switching is to be based on the switching tag, and the selected size of the switching tag.

9. The network manager of claim 6, wherein the explorer resource and the controller each are configured for accessing the network according to InfiniBand™ network protocol.

10. A network within a server system, the network comprising:

a plurality of network switches configured for switching data packets; and

a network manager configured for detecting network nodes, including the network switches, within the prescribed subnetwork, the network manager configured for selecting a size of address fields to be used for switching the data packets, based on a number of the detected network nodes, the network manager configured for configuring the network switches to switch each of the data packets based on a corresponding switching tag added to a start of the corresponding data packet and having the selected size, each network switch switching a received data packet based on the corresponding switching tag.

11. The network of claim 11, wherein the size corresponds to a selected number of bits.

12. The network of claim 11, wherein each network switch is configured for generating address table entries based on the selected size.

13. The network of claim 11, wherein the at least one network switch and the network nodes are configured for communication according to InfiniBand™ network protocol.

14. The network of claim 11, wherein each network switch is configured for adding a new switching tag to the start of an InfiniBand™ packet received from a network node and having a destination local identifier (DLID) specifying a destination node on the network, the new switching tag specifying the destination node based on the DLID and having the selected size.

15. The network of claim 14, wherein each network switch is configured for selectively removing the new switching tag from the InfiniBand™ packet based on whether the new switching tag specifies a destination node reachable by the corresponding network switch.